

ENTERED

May 21, 2018

David J. Bradley, Clerk

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

BAKER HUGHES OILFIELD OPERATIONS LLC,	§	
	§	
<i>Plaintiff,</i>	§	
	§	
v.	§	CIVIL ACTION H-16-1956
	§	
SMITH INTERNATIONAL, INC.,	§	
	§	
<i>Defendant.</i>	§	

MEMORANDUM OPINION AND ORDER

Pending before the court is a report and recommendation (“R&R”) on claim construction from Special Master Karl Bayer. Dkt. 79. Plaintiff Baker Hughes Oilfield Operations LLC (“Baker Hughes”) objected to one construction. Dkt. 84. Defendant Smith International, Inc. (“Smith”) objected to two constructions. Dkt. 85. Having considered the R&R, objections, briefing, relevant documents in the record, and applicable law, the court is of the opinion that the R&R should be ADOPTED IN FULL.

I. BACKGROUND

On July 1, 2016, Baker Hughes sued Smith for infringement of U.S. Patent Nos. 8,020,635 (“‘635 Patent”), 8,215,418 (“‘418 Patent”), and 8,881,833 (“‘833 Patent”). Dkt. 1. Smith counterclaimed, seeking a declaration and judgment that: (1) the patents-in-suit are not infringed by Smith; and (2) the patents-in-suit are invalid. Dkt. 12. The technology at issue involves “reamers,” which are expandable downhole tools used in the drilling of oil and gas wells to enlarge the borehole’s diameter beyond the originally drilled size. Dkt. 39.

The parties now seek to construe terms from each patent-in-suit. The court appointed Special Master Bayer for the purpose of claim construction. Dkt. 56. Special Master Bayer presided over

the *Markman* hearing on November 7, 2017. Dkt. 59. Both parties submitted pre-*Markman* and post-*Markman* briefs. Dkts. 38–40, 66–69. In his R&R, the Special Master construed fourteen terms/phrases and provided the qualifications of a person of ordinary skill in the art (“POSITA”). Dkt. 79. Both parties now object to portions of the R&R. Dkts. 84, 85.

II. LEGAL STANDARD

A. Special Master

Pursuant to the order appointing a special master (Dkt. 56), the parties were required to submit objections to the R&R within fourteen days of the date Special Master Bayer submitted the R&R to the court. The court decides de novo all objections to findings of fact or conclusions of law made or recommended by the Special Master. Fed. R. Civ. P. 53(f); Dkt. 56.

B. Claim Construction

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *See id.* at 1313. The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *See id.* at 1314. Courts give claim terms their “ordinary and customary meaning” as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent. *Id.* at 1312–13.

The claims themselves provide substantial guidance in determining the meaning of particular claim terms. *Id.* at 1314. First, a term’s context in the asserted claim can be very instructive. *Id.* “Other claims of the patent in question, both asserted and unasserted, can also be valuable sources

of enlightenment as to the meaning of a claim term. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims.” *Id.* (citations omitted). Differences among the claim terms can also assist in understanding a term’s meaning. *Id.* “For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” *Id.* at 1314–15.

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). “[T]he specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’” *Id.* (quoting *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). This is true because a patentee may define his own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. *Id.* at 1316. In these situations, the inventor’s lexicography governs. *Id.* The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). “Although the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)). The prosecution history is another tool to supply the proper context for claim construction because a patent applicant may also define a term

in prosecuting the patent. *Home Diagnostics, Inc., v. Lifescan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) (“As in the case of the specification, a patent applicant may define a term in prosecuting a patent.”).

Although extrinsic evidence can be useful, it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Phillips*, 415 F.3d at 1317 (citations omitted). Technical dictionaries and treatises may help explain the underlying technology and the manner in which one skilled in the art might use claim terms. *Id.* at 1318. However, they may also provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id.* Similarly, expert testimony may aid in explaining the underlying technology and determining the particular meaning of a term in the pertinent field. *Id.* But an expert’s conclusory, unsupported assertions as to a term’s definition are unhelpful. *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

III. ANALYSIS

Collectively, the parties objected to three terms: (1) “actuation member”; (2) “substantially identical”/“substantially the same”; and (3) “increasing a flow rate of drilling fluid through the expandable reamer to cause at least one blade of the expandable reamer to move from a retracted position to an expanded position.” Dkts. 84; 85. The court ADOPTS the remainder of the R&R and will consider each objection in turn.

A. “actuation member”

Special Master Bayer recommends the following construction: “A movable mechanism including, a movable sleeve, linkage or pistons.” Dkt. 79-1. Smith objects to that construction and

proposes the following construction: “a movable sleeve with an affixed pin.” Dkt. 85 at 3. Baker Hughes does not object to the Special Master’s construction.

This term appears in claims 1, 2, 6, 11–15, and 19 of the ‘635 Patent and claims 3, 6, 7, 10, 11, 15, and 18 of the ‘418 Patent. Claim 1 of the ‘635 Patent is instructive and provides:

an actuation member selectively and repeatably positionable between a first position within the tubular body and a second position within the tubular body, and configured to maintain the expandable reamer in a first operating condition during a flow of drilling fluid through the tubular body when the actuation member is positioned in the first position and to maintain the expandable reamer in a second operating condition during a substantially identical flow of drilling fluid through the tubular body when the actuation member is positioned in the second position.

Dkt. 38-1 at 43. Smith argues that its construction is the only embodiment from that can perform the claims’ requirements. Dkt. 85 at 5. Baker Hughes responds that Smith improperly reads limitations into the claim that are not supported by the claims and specifications. Dkt. 87 at 8–11.

Smith points to the ‘635 Patent’s specification for the limitation that the actuation member must utilize an affixed pin. Dkt. 85 at 5–6. The specification provides that “a pressure-actuated pin guide may be employed to cause the reamer to assume different operational conditions. More specifically, a pin guide may comprise a cylinder with a groove having alternating upwardly sloping and downwardly sloping arcuate paths formed at least partially along the circumference of the cylinder and a pin affixed to an actuation sleeve, the pin disposed within the groove.” Dkt. 38-1 at 30. However, both patents’ specifications also provide that “the expandable reamer of the present invention may be actuated by mechanical means such as threaded elements, pistons, linkages, tapered elements or cams, or other mechanical configurations may be used.” *Id.* at 31; Dkt. 38-2 at 31.

Smith attempts to read a limitation from the specification into the claims, which is improper. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 904 (Fed. Cir. 2004). However, “there is

sometimes a fine line between reading a claim in light of the specification, and reading a limitation into the claim from the specification.” *Id.* (citations omitted). “[A]n inherent tension exists as to whether a statement is a clear lexicographic definition or a description of a preferred embodiment. The problem is to interpret claims ‘in view of the specification’ without unnecessarily importing limitations from the specification into the claims.” *Id.* at 904–05 (citations omitted).

Here, the specification does not define “actuation member” as restrictively as Smith argues. *See id.* at 905. Indeed, the specification provides that a “pin guide *may* be employed.” Dkt. 38-1 at 30 (emphasis added). The specification further provides different means for the invention to be actuated. *See id.* at 31. The specification includes other embodiments, such as Figures 2A and 2B. *Id.* at 37. This embodiment does not include an affixed pin as Smith’s construction requires. *See Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013) (“[A] claim interpretation that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.”). Thus, the court declines to limit the construction to the extent that Smith proposes.

Further, claim differentiation precludes Smith’s construction. Claim 15, dependent on claim 11, adds the requirement of “traversing at least one pin along a circumferentially extending groove.” Dkt. 38-1 at 44. Claim 11 requires no such pin assembly. “The doctrine of claim differentiation is at its strongest in this type of case, ‘where the limitation that is sought to be read into an independent claim already appears in a dependent claim.’” *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (citations omitted). Smith argues that independent claim 11 requires an affixed pin even though dependent claim 15 adds that requirement. Thus, Smith’s narrow construction is improper and its objection is OVERRULED.

B. “substantially identical”/“substantially the same”

Special Master Bayer recommends that these terms be given their plain and ordinary meaning. Dkt. 79-1. Smith objects to that construction. Dkt. 85 at 10. According to Smith, the terms are “[i]nvalid as indefinite and/or lacking adequate written description or enablement.” *Id.* Baker Hughes does not object to the Special Master’s construction.

These term appears in claims 18–20 of the ‘418 Patent and claims 1, 7, 8, and 11 of the ‘635 Patent. The terms relate to the flow of drilling fluid. For example, the claims at issue in the ‘418 Patent require “substantially identical rates of drilling fluid flow” and “substantially identical flow rates.” Dkt. 38-2 at 44. The claims at issue in the ‘635 Patent require “a substantially identical flow of drilling fluid” and “drilling fluid . . . at a flow rate substantially the same as the first flow rate.” Dkt. 38-1 at 43.

“A patent is presumed valid under 35 U.S.C. § 282 and, ‘consistent with that principle, a [fact finder is] instructed to evaluate . . . whether an invalidity defense has been approved by clear and convincing evidence.’” *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1377 (Fed. Cir. 2015). And when dealing with the issue of definiteness, the Supreme Court requires that “a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014). Thus, Smith must prove by clear and convincing evidence that the claims, viewed in light of the specification and prosecution history, fail to inform a POSITA about the scope of the invention with reasonable certainty. *Id.* Smith does not meet this burden.

Smith argues that the intrinsic evidence provides no objective boundaries for what second flow rate could be substantially identical or substantially the same to the first. Dkt. 85 at 13.

Notably, Smith does not provide any evidence from a POSITA that the claims' scope cannot be ascertained with reasonable certainty. And though the burden is not on Baker Hughes, Baker Hughes points to examples in the '635 Patent specification that provide specific flow rates. Dkt. 87 at 13. For example, the specification provides how particular flow rates ("relatively high flow rate of drilling fluid, for example, 800 gallons per minute"; "400 gallons per minute flow rate of drilling fluid") will affect the positioning of "pin 364" and "actuation sleeve 368" relative to the peaks and valleys in "groove 366." Dkt. 38-1 at 38. The specification provides that a relatively high flow rate could position pin 364 to position B1 and D1. *Id.* Thus, the specification provides how two "relatively high flow rate[s]" would position pin 364 and actuation sleeve 368. *Id.* This intrinsic evidence provides objective guidance to a POSITA. It is possible that a POSITA would still not be able to determine the scope of the claim with reasonable certainty, but without the benefit of a POSITA's testimony, the court cannot make that determination. And because Smith must prove indefiniteness by clear and convincing evidence, Smith fails to meet its burden.

Smith's objection is OVERRULED. However, Smith may raise this indefiniteness issue once there is expert testimony on the matter.

C. "increasing a flow rate of drilling fluid through the expandable reamer to cause at least one blade of the expandable reamer to move from a retracted position to an expanded position"

Special Master Bayer recommends the following construction: "Increasing the flow of drilling fluid against the moveable blades such that the blade moves from a retracted position to an expanded position." Dkt. 79-1. Baker Hughes objects to that construction and proposes that the

phrase be given its plain and ordinary meaning. Dkt. 84 at 1. Smith does not object to the Special Master's construction.

This term appears in claim 1 of the '418 Patent. That claim provides:

A method of operating an expandable reamer, the method comprising:

increasing a flow rate of drilling fluid through the expandable reamer to cause at least one blade of the expandable reamer to move from a retracted position to an expanded position while the expandable reamer is positioned downhole;

decreasing the flow rate of drilling fluid through the expandable reamer to cause the at least one blade of the expandable reamer to move from the expanded position to the retracted position while the expandable reamer is positioned downhole; and

increasing the flow rate of the drilling fluid through the expandable reamer and maintaining the at least one blade of the expandable reamer in the retracted position while the expandable reamer is positioned downhole.

Dkt. 38-2 at 43. Baker Hughes argues that the Special Master's construction improperly limits the scope to only one of many disclosed embodiments and that there is no prosecution history disclaimer. Dkt. 84 at 4–10.

“[A]n applicant cannot recapture claim scope that was surrendered or disclaimed.” *Hakim v. Cannon Avent Grp., PLC*, 479 F.3d 1313, 1318 (Fed. Cir. 2007). Baker Hughes attempts to recapture claim scope that it disclaimed in the '418 Patent's prosecution history and thus proposes an improper construction.

The '418 Patent is a continuation of U.S. Patent No. 7,308,937 (“'937 Patent”), which is a continuation of U.S. Patent No. 7,036,611 (“'611 Patent”). Dkt. 38-2 at 2. During the prosecution of the '611 Patent, Baker Hughes sought to distinguish its claim from U.S. Patent No. 6,732,817 (“Dewey Patent”) by arguing that “Dewey never communicates drilling fluid with any blade, but only

with drive ring 570, which acts upon the blade.” Dkt. 86-3 at 25. Further, the United States Patent and Trademark Office (“USPTO”) originally rejected the ‘611 Patent due to the Dewey Patent. *Id.*

In response, Baker Hughes amended the ‘611 Patent as follows:

an actuation sleeve positioned along an inner diameter of the tubular body and configured to selectively ~~prevent or allow~~ drilling fluid communication with the at least one laterally moveable blade to effect outward lateral movement thereof according to a flow rate of drilling fluid passing therethrough.

Id. at 3. Thus, Baker Hughes sought to distinguish the ‘611 Patent from the Dewey Patent by arguing that unlike the Dewey Patent, the ‘611 Patent required the drilling fluid to act on the blade.

Likewise, during the prosecution of the later ‘937 Patent, Baker Hughes again attempted to distinguish the patent from the Dewey Patent. Baker Hughes distinguished the Dewey Patent by arguing that in Dewey,

drilling fluid passing through the tool is **always** in communication with a blade actuation mechanism, but is **never** in communication with **a blade** to effect movement. Rather, when the blades (arms) 520 are to be extended, the drilling fluid acts upon piston 530, drive ring block 572 and drive ring 570 to move blades (arms) 520.

Dkt. 86-5 at 16 (emphasis in original). Thus, once again, Baker Hughes argued that the ‘937 Patent is different from the Dewey Patent for the very reason that in Dewey, drilling fluid does not act against the blades.

Baker Hughes argues that it did not clearly and unmistakably disavow the claim scope. Dkt. 84 at 7–9. The court disagrees. While prosecuting both previous patents, Baker Hughes argued that the patents were different than the Dewey Patent because Dewey *did not* involve drilling fluid acting directly against the blades. Baker Hughes now argues that the ‘611 Patent and ‘937 Patent did not necessarily require drilling fluid to act directly against blades. If that is the case, then Baker Hughes

did not distinguish those patents from the Dewey Patent. Because the only reasonable interpretation of the prosecution history is that the patents require drilling fluid to act directly against the blades, the disavowal was clear and unmistakable. *See Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016).

Baker Hughes also argues that the language of the ‘418 Patent differs from the language of the claims in the ‘611 Patent. Dkt. 84 at 9–10. Baker Hughes argues that because the ‘418 Patent’s claim 1 states that the drilling fluid will “cause” at least one blade to expand and the ‘611 Patent states that the drilling fluid will “communicat[e]” with the blade to “effect” outward movement, the claims are not the same. *Id.* at 9. Once again, the court disagrees.


First, the court agrees with Smith that the claims must be the “same,” not identical. *See Sanofi v. Watson Labs. Inc.*, 875 F.3d 636, 650 (Fed. Cir. 2017). Moreover, the limitation must be the same, not the entire claim. *Id.* The limitation in the ‘611 Patent requires that the drilling fluid “communicat[e]” with at least one blade to “effect” outward movement of the blade. Dkt. 86-3 at 3. Baker Hughes argues that the language is distinguishable from the ‘418 Patent because the drilling fluid must communicate “*directly*” with the blade. Dkt. 84 at 10 (emphasis added). But the language contains no such limitation, which is why Baker Hughes asserted that limitation to the USPTO during the prosecution history of the ‘611 Patent. *See* Dkt. 86-3 at 25. Likewise, the ‘418 Patent requires the drilling fluid “to cause” one of the blades to expand. Dkt. 38-2 at 43. In other words, the drilling fluid must communicate with the blade in a manner that effects outward movement of the blade. While the claim limitations are not worded identically, they contain the same limitation, which, as Baker Hughes admitted, requires the drilling fluid to act against the blades.

Moreover, the USPTO already reached a similar finding. Dkt. 86-6. The USPTO found that claim 19 of the ‘635 Patent and claim 1 of the ‘611 Patent were not identical, but were also “not patentably distinct from each other because the instant claim is fully encompassed by claims 1 and 9 of [the ‘611 Patent].” *Id.* at 4. Just like the ‘418 Patent, the ‘635 Patent did not use the word “communicate.” Dkt. 38-1 at 44. Rather, the language stated that “the pressure of drilling fluid through the tubular body” would “move the at least one blade to the extended position.” *Id.* The USPTO found that the language, which is nearly identical to the ‘418 Patent’s limitation, was not “patentably distinct” from the ‘611 Patent’s language. Dkt. 86-6 at 4. The court agrees and applies the same reasoning to the ‘418 Patent. Thus, Baker Hughes’s objection is **OVERRULED**.

IV. CONCLUSION

Both parties’ objections (Dkts. 84, 85) are **OVERRULED**. Accordingly, Special Master Bayer’s R&R (Dkt. 79) is **ADOPTED IN FULL**.

Signed at Houston, Texas on May 21, 2018.



Gray H. Miller
United States District Judge